

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims**

1. (currently amended) A crystal-growing furnace, in particular a vertical Bridgman or vertical gradient freeze crystal-growing furnace ~~having, comprising:~~  
a crucible;  
a top heater positioned substantially proximate a top portion of the crucible;  
a bottom heater positioned substantially proximate a bottom portion of the crucible, wherein the top heater and the bottom heater are regulated to achieve a predetermined axial temperature gradient within the crucible;  
a jacket heater surrounding the crucible coaxially and having a device for regulating the heat output of the jacket ~~heater; heater, characterized in that~~  
a hollow cylindrical body made of a heat conducting material ~~is present~~  
configured to act as a heat bridge between the crucible and the jacket heater;  
at least two thermocouples ~~which are~~ offset radially relative to one another are ~~provided~~ in a horizontal plane ~~intersecting~~ bisecting the jacket heater and the crucible for measuring a radial temperature difference, the heat output of the jacket heater being regulated ~~as a function of the~~ to achieve a substantially uniform temperature difference across the portion of the crucible disposed in the horizontal plane.
2. (previously presented) The crystal-growing furnace according to Claim 1, characterized in that at least two jacket heaters are provided and are arranged such that they are spaced a distance apart in the axial direction, the heat output of each being adjustable independently of the other, and a pair of thermocouples being provided for each jacket heater.
3. (previously presented) The crystal-growing furnace according to Claim 1, characterized in that the hollow cylindrical body has at least two boreholes in which two thermocouples are provided, radially offset relative to one another, permitting measurement of a radial temperature difference in the hollow cylindrical body, and an electric variable representing this radial temperature difference in the hollow cylindrical body is sent to a regulating device for the heat output of the jacket heater.

4. (previously presented) The crystal-growing furnace according to Claim 3, characterized in that the borehole for the thermocouple situated on the outside radially is positioned in the radial direction, and the borehole for the thermocouple, which is situated on the inside radially, is positioned in the axial direction.
5. (previously presented) The crystal-growing furnace according to Claim 3, characterized in that the thermocouples of a pair of thermocouples are connected electrically back to back, so that the differential voltage forms a measure of the temperature difference.
6. (canceled)
7. (currently amended) ~~The~~ A method of regulating the radial heat output of a jacket heater surrounding a melting crucible, comprising:  
  
    ~~characterized in that~~ determining the temperature difference between two radially offset points within the jacket heater in a horizontal plane intersecting the jacket heater and the crucible ~~is determined;~~ and  
  
    adjusting the temperature difference thus determined ~~is adjusted~~ to zero by a corresponding regulation of the heat output of the jacket heater.
8. (previously presented) The method of regulating the heat output of a jacket heater according to Claim 7, characterized in that the crystal-growing furnace is provided with a plurality of heating zones situated one above the other, each defined by a jacket heater, and the regulation of the heat output of the jacket heaters of the individual heating zones is performed by a multi-variable regulator so that the sum of the squares of the deviation of the temperature differences prevailing in the particular heating zone is minimal.
9. (previously presented) The method of regulating the heat output of a jacket heater according to claim 7 or 8, characterized in that the temperature measurement is performed with thermocouples.